

Application#	Patent#	Status	Date Filed	Title	Inventor Name
09534655	6849581	150	03/24/2000	Gelled Hydrocarbon Compositions And Methods For Use Thereof	Boles, Joel L.
10623044	Not Issued	93	07/18/2003	Method Of Reclaiming Brine Solutions Using An Organic Chelant	Boles, Joel L.
10871108	7086469	150	06/18/2004	Method Of Increasing The Reaction Efficiency Of Acetic And/Or Formic Acids	Boles, Joel L.
06266548	Not Issued	161	05/22/1981	Diverting Additive And Method	Boles, Joel L.
06419294	4476931	150	09/17/1982	Water Control Well Treating Solution And Method	Boles, Joel L.
07707685	Not Issued	161	05/30/1991	Polysaccharide Degrading Compositions And Methods	Boles, Joel L.
08418332	5497830	150	04/06/1995	Coated Breaker For Crosslinked Acid	Boles, Joel L.
08623212	5736594	250	03/28/1996	Cementing Compositions And Methods Using Recycled Expanded Polystyrene	Boles, Joel L.
09052324	5975206	150	03/31/1998	Acid Gels For Fracturing Subterranean Formations	Boles, Joel L.
60127298	Not Issued	159	03/30/1999	Gelled Hydrocarbon Compositions And Methods For Use Thereof	Boles, Joel L.
60129770	Not Issued	159	04/15/1999	Gelled Hydrocarbon Compositions And Methods For Use Thereof	Boles, Joel L.
60148274	Not Issued	159	08/11/1999	Gelled Hydrocarbon Compositions And Methods For Use Thereof	Boles, Joel L.
09599024	6443230	150	06/21/2000	Organic Hydrofluoric Acid Spearhead System	Boles, Joel Lynn
10758410	Not Issued	71	01/15/2004	Crosslinking Delaying Agents For Acid Fluids	Boles, Joel Lynn
10954801	Not Issued	30	09/30/2004	Well Treating Composition Containing Relatively Lightweight Proppant And Acid	Boles, Joel Lynn
60440818	Not Issued	159	01/17/2003	Crosslinking Delaying Agents For Acid Fluids	Boles, Joel Lynn
60549632	Not Issued	159	03/03/2004	Increasing Reaction Efficiency Of Acetic Acid	Boles, Joel Lynn
09408291	6046140	150	09/29/1999	Acid Gels For Fracturing Subterranean Formations	Boles, Joel Lynn
60140383	Not Issued	159	06/22/1999	Organic Hydrofluoric Acid Spearhead System	Boles, Joel Lynn

## EAST Search History

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	479	507/225.ccls.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/08/23 16:21
L2	452	166/271.ccls.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/08/23 16:21
S1	1	"20040152602".pn.	US-PGPUB; USPAT	OR	ON	2006/03/01 13:25
S2	5	("4476931" "5497830" "5975206" "6046140" "6849581") .pn.	US-PGPUB; USPAT	OR	ON	2006/03/01 07:53
S3	1	S2 and (lactic or lactide)	US-PGPUB; USPAT	OR	ON	2006/03/01 08:02
S4	10	("4460751" "4488975" "4649999" " 4657061" "4657080" "4797216" "47 99550" "5478802" "5497830" "6046 140").PN.	US-PGPUB; USPAT	OR	ON	2006/03/01 08:02
S5	4	S4 and (lactic or lactide)	US-PGPUB; USPAT	OR	ON	2006/03/01 08:03
S6	469	507/225.ccls.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/03/01 08:04
S7	447	166/271.ccls.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/03/01 08:09
S8	426183	(hydrochloric adj acid) (chlorohydric adj acid) hydrochloride (hydrogen adj chloride) (muriatic adj acid)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/03/01 10:35

## EAST Search History

S9	109830	acrylamide propanamide propeneamide (acrylic adj amide) (ethylene adj carboxamide) ethylenecarboxamide ethylene\$1carboxamide propenamide ((propenoic adj acid) near5 amide) (vinyl adj amide) vinylamide vinyl\$1amide	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/03/01 10:35
S10	297	(acrylamidomethylpropane adj sulfonic adj acid) (acrylamidomethylpropane adj sulfonate) "2-acrylamido-2-methylpropane-1-sulfonic" "2-acrylamido-2-methylpropane-1-sulfonate" (acrylamidomethylpropane adj sulphonic adj acid) (acrylamidomethylpropane adj sulphonate) "2-acrylamido-2-methylpropane-1-sulphonic" "2-acrylamido-2-methylpropane-1-sulphonate"	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/03/01 10:36
S11	299593	Zirconium or Zr	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/03/01 10:36
S12	6583811	aluminum or Al	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/03/01 10:37
S13	80632	(lactic or hydroxypropanoic) adj acid	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/03/01 10:38
S14	0	S8 and S9 and S10 and S11 and S12 and S13	EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/03/01 10:39
S15	0	S8 and S9 and S10 and S11 and S13	EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/03/01 10:40
S16	0	S8 and S9 and S10 and S12 and S13	EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/03/01 10:40

## EAST Search History

S17	0	S8 and S9 and S11 and S12 and S13	EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/03/01 10:40
S18	1	S8 and S9 and S12 and S13	EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/03/01 10:41
S19	0	S8 and S9 and S11 and S13	EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/03/01 10:41
S20	0	S8 and S9 and S10 and S11 and S12 and S13	USOCR	OR	ON	2006/03/01 10:45
S21	0	S8 and S9 and S10 and S11 and S13	USOCR	OR	ON	2006/03/01 10:40
S22	0	S8 and S9 and S10 and S12 and S13	USOCR	OR	ON	2006/03/01 10:40
S23	10	S8 and S9 and S11 and S12 and S13	USOCR	OR	ON	2006/03/01 10:43
S24	10	S8 and S9 and S11 and S13	USOCR	OR	ON	2006/03/01 10:41
S25	64	S8 and S9 and S12 and S13	USOCR	OR	ON	2006/03/01 10:41
S26	0	S24 not S23	USOCR	OR	ON	2006/03/01 10:43
S27	54	S25 not (S23 S24)	USOCR	OR	ON	2006/03/01 10:43
S28	6	S8 and S9 and S10 and S11 and S12 and S13	US-PGPUB; USPAT	OR	ON	2006/03/01 10:50
S29	2239	S11 same S12 same (crosslink\$4 or cross\$1link\$4 or (cross adj link\$4))	US-PGPUB; USPAT	OR	ON	2006/03/01 10:53
S30	1103	S11 with S12 with (crosslink\$4 or cross\$1link\$4 or (cross adj link\$4))	US-PGPUB; USPAT	OR	ON	2006/03/01 11:40
S31	918	zirconium with aluminum with (crosslink\$4 or cross\$1link\$4 or (cross adj link\$4))	US-PGPUB; USPAT	OR	ON	2006/03/01 10:56
S32	202	S31 same mixt\$5	US-PGPUB; USPAT	OR	ON	2006/03/01 10:58
S33	77	S32 and S9	US-PGPUB; USPAT	OR	ON	2006/03/01 10:58
S34	159	S31 same mixt\$5	US-PGPUB; USPAT	OR	ON	2006/03/01 10:58
S35	58	S34 and S9	US-PGPUB; USPAT	OR	ON	2006/03/01 11:00
S36	1	S34 and (S9 with S10)	US-PGPUB; USPAT	OR	ON	2006/03/01 11:01
S37	1	S34 and (S9 same S10)	US-PGPUB; USPAT	OR	ON	2006/03/01 11:01
S38	1	S34 and S9 and S10	US-PGPUB; USPAT	OR	ON	2006/03/01 11:01

## EAST Search History

S39	252395	(crosslink\$4 or cross\$1link\$4 or (cross adj link\$4))	US-PGPUB; USPAT	OR	ON	2006/03/01 11:40
S40	20	S9 and S10 and S13 and S39	US-PGPUB; USPAT	OR	ON	2006/03/01 11:42
S41	1	(S9 with S10) and (S13 with S39)	US-PGPUB; USPAT	OR	ON	2006/03/01 11:41
S42	1	(S9 same S10) and (S13 with S39)	US-PGPUB; USPAT	OR	ON	2006/03/01 11:41
S43	2	(S9 same S10) and (S13 same S39)	US-PGPUB; USPAT	OR	ON	2006/03/01 11:41
S44	4	(US-4460751-\$ or US-4624795-\$ or US-4917186-\$).did. or (US-3481400-\$).did.	USPAT; USOCR	OR	ON	2006/03/01 11:48
S45	0	S44 and breaker	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/03/01 11:47
S46	50	(US-4329425-\$ or US-4937047-\$ or US-5665428-\$ or US-4481952-\$ or US-4986355-\$ or US-H001340-\$ or US-4511584-\$ or US-4609479-\$ or US-4767550-\$ or US-4790958-\$ or US-5026589-\$ or US-5420107-\$ or US-5654020-\$ or US-5759843-\$ or US-6063910-\$ or US-6096352-\$ or US-6187329-\$ or US-3615695-\$ or US-4019862-\$ or US-4138498-\$ or US-4117172-\$ or US-4254222-\$ or US-4258064-\$ or US-4287306-\$ or US-4309417-\$ or US-4316954-\$). did. or (US-4351899-\$ or US-4352826-\$ or US-4374152-\$ or US-4397878-\$ or US-4399224-\$ or US-4460751-\$ or US-4509983-\$ or US-4524829-\$ or US-4524828-\$ or US-4537784-\$ or US-RE32016-\$ or US-4606772-\$ or US-4776904-\$ or US-4852977-\$ or US-4953621-\$ or US-4958038-\$ or US-4957936-\$ or US-4981701-\$ or US-4986354-\$ or US-5006458-\$ or US-5021171-\$ or US-5192459-\$ or US-5226481-\$ or US-5252235-\$).did.	USPAT	OR	ON	2006/03/01 11:53
S47	4	S46 and S8 and (S9 or S10) and (S11 or S12) and S13	USPAT	OR	ON	2006/03/01 11:55

## EAST Search History

S48	345257	((acetic ethylic glacial acetic methanecarboxylic) adj acid) vinegar	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/03/01 13:25
S49	79921	(formic aminic methanoic formylic hydrogencarboxylic) adj acid	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/03/01 13:25
S50	426183	(hydrochloric adj acid) (chlorohydric adj acid) hydrochloride (hydrogen adj chloride) (muriatic adj acid)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/03/01 13:26
S51	62616	(S48 or S49) with S50	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/03/01 13:26
S52	12499	S48 with S49 with S50	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/03/01 13:27
S53	109830	acrylamide propenamide propeneamide (acrylic adj amide) (ethylene adj carboxamide) ethylenecarboxamide ethylene\$1carboxamide propenamide ((propenoic adj acid) near5 amide) (vinyl adj amide) vinylamide vinyl\$1amide	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/03/01 13:27

## EAST Search History

S54	297	(acrylamidomethylpropane adj sulfonic adj acid) (acrylamidomethylpropane adj sulfonate) "2-acrylamido-2-methylpropane-1-sulfonic" "2-acrylamido-2-methylpropane-1-sulfonate" (acrylamidomethylpropane adj sulphonic adj acid) (acrylamidomethylpropane adj sulphonate) "2-acrylamido-2-methylpropane-1-sulphonic" "2-acrylamido-2-methylpropane-1-sulphonate"	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/03/01 13:27
S55	299593	Zirconium or Zr	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/03/01 13:27
S56	6583811	aluminum or Al	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/03/01 13:29
S57	80632	(lactic or hydroxypropanoic) adj acid	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/03/01 13:27
S58	6	S50 and S53 and S54 and S55 and S56 and S57	US-PGPUB; USPAT	OR	ON	2006/03/01 13:29
S59	1	S52 and S58	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/03/01 13:28
S60	3423	S50 and S53 and (S55 or S56) and S57	US-PGPUB; USPAT	OR	ON	2006/03/01 13:31
S61	1331395	aluminum	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/03/01 13:29

## EAST Search History

S62	2278	S50 and S53 and (S55 or S61) and S57	US-PGPUB; USPAT	OR	ON	2006/03/01 13:31
S63	350	S52 and S53 and (S55 or S61) and S57	US-PGPUB; USPAT	OR	ON	2006/03/01 13:32
S64	18	(S52 with mixt\$5) and S53 and (S55 or S61) and S57	US-PGPUB; USPAT	OR	ON	2006/03/01 13:32
S65	1	"6849581".pn.	US-PGPUB; USPAT; USOCR	OR	ON	2006/08/23 14:17
S66	5	(US-4752404-\$ or US-4460751-\$ or US-4917186-\$ or US-4624795-\$). did. or (US-3481400-\$).did.	USPAT; USOCR	OR	ON	2006/08/23 15:12
S69	360802	carbonate limestone lime\$1stone (lime adj stone) dolemite	USPAT; USOCR	OR	ON	2006/08/23 15:14
S70	4	S66 and S69	USPAT; USOCR	OR	ON	2006/08/23 15:15